

20-7941



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

646.9711

Job Sheet 200368



Part No: 646.9711

Job Qty: 80 pcs

Part Name: Blade



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 9/10/19

Job Tracking No:

Due Date: 10/15/19

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG 646.9700 REV.H IPP REV:A NEW ISSUE 12/09/24 JFS VERIFY BY:DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Bandsaw - 1	80 pcs		10/15/19	0.00	2.49	Bandsaw - 1		Enml 17/11/19
110	HAAS 4 Axis - B4B	80 pcs		10/15/19	0.13	33.33	HAAS - 1 - B4B		Enml 19/11/19
							HAAS - 2 - B4B		
							HAAS - 3 - B4B		
							HAAS - 4 - B4B		
120	QC 2	80 pcs		10/15/19	0.00	0.00	QC 2 - 1		
							QC 2 - 12		
							QC 2 - 14		
							QC 2 - 17		
							QC 2 - 19		
							QC 2 - 2		
							QC 2 - 20		
							QC 2 - 22		
							QC 2 - 23		
							QC 2 - 25		
							QC 2 - 32		
							QC 2 - 33		
							QC 2 - 35		
							QC 2 - 39		
							QC 2 - 4		
							QC 2 - 40		
							QC 2 - 44		
							QC 2 - 45		
							QC 2 - 48		
							QC 2 - 49		Enml 19/11/19
							QC 2 - 50		
							QC 2 - 51		
							QC 2 - 52		
							QC 2 - 57		
							QC 2 - 62		



Container No: S229147



Part: 646.9711

Job No: 200368

Serial No/Batch: S229147

Revision: H

Inspector:

Exp Date:

Instructions: Various STC's

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 11/03/19

130 QC 8	80 pcs	10/15/19	0.00 0.00	QC 2 - 63	
				QC 2 - 8	
				QC 2 - 66	
				QC 2 - 64	
				QC 2 - 65	
				QC 2 - 5	
				QC 2 - 71	
				QC 2 - 73	
				QC 2 - 69	
				QC 8 - 12	
				QC 8 - 14	OK 19/11/14
				QC 8 - 17	
				QC 8 - 20	
				QC 8 - 25	
				QC 8 - 3	
				QC 8 - 32	
				QC 8 - 33	
				QC 8 - 35	
				QC 8 - 39	
				QC 8 - 4	
QC 8 - 44					
QC 8 - 45					
QC 8 - 49					
QC 8 - 58					
QC 8 - 8					
QC 8 - 9					
QC 8 - 68					
QC 8 - 67					
QC 8 - 1 (A)					
QC 8 - 47					
QC 8 - 40					
QC 8 - 52					
QC 8 - 23					
QC 8 - 57					
QC 8 - 76					
140 Outsource - 1 - Heat Treat	80 pcs	10/15/19		MEI001-VC	10
150 Packaging 2-1 - Receive - B4B	80 pcs	10/15/19	0.00 0.00	Packaging 2 - 1 - B4B	
				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Plex 9/10/19 2:56 PM Dart.lajeunesse.marie	

https://www.plexonline.com/db832b13-6f5a-4bf4-92f0-337a35cd61fa/Plexus_Control/Report_Viewer_2.asp?URL=../Part/Job_Sheet.asp&Report=True... 3/5

185 Packaging 3-1 - Stock - B4B	80 pcs	10/15/19	0.00	0.00	QC 14 - 81	
					Packaging 3 - 1 - B4B	
					Packaging 3 - 2 - B4B	
					Packaging 3 - 3 - B4B	
					Packaging 3 - 4 - B4B	
					Packaging 3 - 5 - B4B	
					Packaging 3 - 6 - B4B	
					Packaging 3 - 7 - B4B	
					Packaging 3 - 8 - B4B	
					Packaging 3 - 9 - B4B	
					Packaging 3 - 10 - B4B	
					Packaging 3 - 11 - B4B	
					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	

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190 QC 21 - SA

80
pcs

10/15/19 0.00 0.00

QC 21 - SA - 21

DAS

QC 21 - SA - 70

21

QC 21 - SA - 53

3-28

DEC 09 2019

Part Op 100 - (Bandsaw) Cut Blank at 4.625"

Descriptions: 110 - (HAAS CNC Vertical Machine) 1-Machine per folio FB135

120 - (QC2- Inspect parts off machine FAI/FAIB)

130 - (QC8- Inspect parts - second check)

140 - (Outsource process - Heat Treat) PO to Metcor: FINISH: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS

PART ARE MADE FROM AISI A2 TOOL STEEL PLEASE NOTE: DETAIL C OF C REQUIRED

150 - (Receive & Inspect for Damage & Mat'l Certs)

155 - (QC6- All purchased or subcontracted products)

160 - (Spray Paint / NDT Room) ***THIN COAT OF PRIMER*** PRIME AS PER DWG, SEE NOTE #4 5195271

170 - (QC14- Inspect Spray Paint)

185 - (Identify as per dwg & Stock Location: _____)

190 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
MSTEEL-A2-B0.500X1.250	AISI A2 Tool Steel Bar, 0.500 X 1.250	30.8800 ft (.386 ea)	100-Bandsaw - 1	5216480=31.34 1.16

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Bandsaw - 1	MSTEEL-A2-B0.500X1.250	31	26	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Blade	0.340Inches + 0.000 - 0.005	0.340 0.335	.339	
2	Blade	0.177Inches + 0.005 - 0.001	0.182 0.176	.177	
3	Blade	3.200Inches ± 0.005	3.205 3.195	3.200	
4	Blade	0.600Inches ± 0.005	0.605 0.595	0.600	
5	Blade	0.985Inches ± 0.005	0.990 0.980	0.980	
6	Blade	2.400Inches ± 0.005	2.405 2.395	2.399	
7	Blade	1.200Inches ± 0.005	1.205 1.195	1.199	
8	Blade	0.250Inches ± 0.005	0.255 0.245	0.249	
9	Blade	37.2Angle ± 0.5	37.7 36.7	37	
10	Blade	0.290Inches ± 0.010	0.300 0.280	288	
11	Blade	30.0Angle ± 0.5	30.5 29.5	30	

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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB045104



Supplier: MEI001-VC
Metcor Inc.
560 Boul. Arthur Sauve
Saint-Eustache
QC
J7R 5A8 Canada
Phone: 450 473 1884
Fax: 450 491 5498

Attention: Bejenaru, Livia

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB045104

PO Date: 11/14/19

Due Date: 11/29/19

**Purchase Order
Revision:**

Revision Date:

Ship-To Contact: Guerin, Kimberley
Phone: 613-632-5200 Ext: 298
kguerin@dartaero.com

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Job	Part	Drawing	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	200368	646.9711	646.9700 Rev H	Blade : Various STC's (Outsource process - Heat Treat) PO to Metcor: FINISH: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS PART ARE MADE FROM AISI A2 TOOL STEEL PLEASE NOTE: DETAIL C OF C REQUIRED	Firmed	-	11/29/19	80 pcs	0 pcs	80 pcs	\$4.05/pcs	\$324.00
NOV 25 2019												
Grand Total:												\$324.00

Guerin



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER POHB045104



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/25/19 2:02 PM Dart.Guerin.Kimberley

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél. 450-473-1884

Télécopieur / Fax administration: 450-491-5456

Télécopieur / Fax production: 450-491-5454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
340904	1

CLIENT / customer: 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LYRÉ A / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

COMMANDE DU CLIENT customer po	CLASSIFICATION PIÈCE part classification	MATÉRIEL material	MAÎTRE D'ŒUVRE prime contractor	PROGRAM
2003104	N/A	A2		
SPECIFICATIONS DU PROCÉDÉ processing specifications				
VAC HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPECIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results	
HARDNESS	59 - 62 HRC	5	60 - 62 HRC	
(507)				
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
80	24	646 9711 (80) 646 9711 JOB 200308		
		1 SUITE CE CARTON		

REMARQUES / comments

APPROUVÉ par / Approved by:

[Signature]

22



DATE: 2010-11-21

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
340901	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
HB045104	N/A	A2		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
VAC HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPÉCIFICATIONS / specified		TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
HARDNESS	58 - 62 HRC		5 (907)	60 - 62 HRC
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
80	24	646.9711 (80) 646.9711 JOB 200368 1 BOITE DE CARTON		

COMMENTAIRES / comments

VAC HARDEN 1800°F - 1:00 HRE

DOUBLE TEMPER 400°F - 2:00 HRS

Heat treatment (HT) was performed with equipment that meets the requirements of requested specification. All HT operations were performed in compliance with the required HT specification and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with the material specification and the purchase order and was found to meet the requirements.

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Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec la spécification demandée. Toutes les opérations de TT ont été faites en conformité avec les requis de la spécification demandée et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec les spécifications du matériel et le bon de commande et le matériel rencontre les exigences spécifiées.

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
340901	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

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APPROUVÉ par / Approved by:

DATE: 2019-11-22

Lucie Desmarais
QA Technician



METCOR INC.

500 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité

Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
340901	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
HB045104	N/A	A2		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
VAC HARDEN				
HARDEN AND TEMPER				
EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results	
HARDNESS	58 - 62 HRC	5 (907)	60 - 62 HRC	
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
80	24	848.9711 (80) 848.9711 JOB 200368 1 BOITE DE CARTON		

2/12/19

COMMENTAIRES / comments

APPROUVÉ par / Approved by:			DATE: 2019-11-21
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APPROUVÉ


METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDITION Shipper
340901	1	141729
EXPÉDITION COMPLÈTE / Shipped Complete		

CLIENT / Customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



LIVRÉ À / Shipped To

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No.	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
HB045104		A2	2019/11/15	CLIENT

QUANTITÉ Quantity	No. PIÈCE / Part No.	NOM DE LA PIÈCE / Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight
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80 646.9711

(80) 646.9711

JOB 200368

24,

1 BOITE DE CARTON

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
BOITE DE CARTON	1	

CERTIFICAT

EXPÉDIÉ PAR: Shipped by:	
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QUANTITÉ EXPÉDIÉE / Quantity Shipped : 80

POIDS EXPÉDIÉ / Weight Shipped : 24,00

QUANTITÉ RESTANTE / Quantity Remaining : 0

POIDS RESTANT / Weight Remaining : 0,00

RECEIVED

NOV 28 2019

DART AEROSPACE LTD.

APPROUVÉ
[Signature]

CERTIFICAT

QUANTITÉ EXPÉDIÉE / Quantity Shipped : 80

POIDS EXPÉDIÉ / Weight Shipped : 24,00

Signature:

Date:

LE Date: Feb 14/2020
19/11/05

Date: 19/11/05

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. 20-7941

Route update only

DART
AEROSPACE

Job: <u>200368</u>		DISPOSITION		DEPARTMENT/PROCESS							
Part No. <u>646.9711</u>		Rework ☐ Scrap ☒ Use-as-is ☐		Skid-tube ☐ Machining ☒ Large Fab ☐		Cross tube ☐ Small Fab ☐ Finishing ☐		Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐		Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐	
Date: <u>19/11/05</u>		Sequence #: <u>110</u>		QTY Affected: <u>3</u>				MRB (Q51042)			
Description Work Order Deviation				Disposition				19-11-05			
I change the wrong off set # in programme 2000, The parts got machined (.035) under size				Scrap + replace with new mat.				Completed By <u>mark 19/11/05</u>			
								Lead hand / Supervisor <u>B.A 19-11-05</u>			
								QC / QA Coordinator <u>19-11-05</u>			
Root Cause		FAULT CATEGORY									
Operator ☒		☐ Pressure/Forced		☐ Contamination		☐ Power Loss/Surge		☐ Positioned Wrong			
Manufacturing Process ☐		☐ Bending		☐ Misaligned/off center		☐ Folio/Program		☒ Outside Tolerance			
Equip/Tooling ☐		☐ Crushing		☐ BOM/Route		☐ Grain Direction		☐ Drawing			
Handling/Preservation ☐		☐ Cracks		☐ Broken/Damage/Defect		☐ Weld		☐ Finish			
Material ☐		☐ Crimp/Kink/Ripple/Wave/Twist		☐ Incomplete/Unclear Instructions		☐ Wrong Stock Pulled		☐ Part Lost/Missing			
Product Improvement ☐		☐ Marks/Chatter		☐ Drill Holes		☐ Out of Sequence		☐ Misread			
Process Improvement ☐		☐ Mislabeled		☐ Fit/Function		☒ Off-set/Set-up					
Human Factors ☐		Other/Details:									